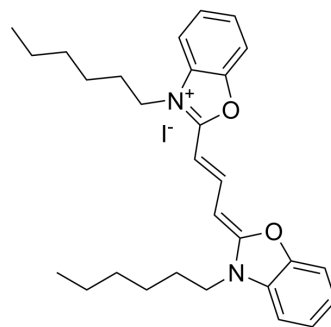


3,3'-Dihexyloxacarbocyanine iodide

Cat. No.:	HY-D0084
CAS No.:	53213-82-4
Molecular Formula:	C ₂₉ H ₃₇ IN ₂ O ₂
Molecular Weight:	572.52
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (58.22 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	1.7467 mL	8.7333 mL	17.4666 mL
		5 mM	0.3493 mL	1.7467 mL	3.4933 mL
		10 mM	0.1747 mL	0.8733 mL	1.7467 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (4.37 mM); Suspended solution; Need ultrasonic 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.37 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	3,3'-Dihexyloxacarbocyanine iodide is a carbocyanine dye which can be used to monitor changes in mitochondrial membrane potential.
In Vitro	<p>Addition of cells to the cuvette containing 0.25 μM 3,3'-Dihexyloxacarbocyanine iodide (DiOCg(3)) leads to an increase in fluorescence, equilibration is rapid and is complete by 4 min. When f-met-leu-phe (10⁻⁷ M) is added to neutrophils preequilibrated with 3,3'-Dihexyloxacarbocyanine iodide, there is a short lag period of 5 seconds. The lag period is followed by a rapid loss of fluorescence. Examination of 3,3'-Dihexyloxacarbocyanine iodide loaded neutrophils using fluorescence microscopy demonstrates that in resting neutrophils the brightest fluorescence is associated with long thin organelles which corresponds to the distribution of mitochondria^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

PROTOCOL

Cell Assay ^[1]

Neutrophils (2.5×10^6 /mL) are preequilibrated in $0.25 \mu\text{M}$ 3,3'-Dihexyloxacarbocyanine iodide (DiOC₆(3)) for 5 min at 37°C in a 1 cm path length cuvette. Final volume is 2 mL. Fluorescence measurements are made in a spectrofluorimeter (emission wavelength: 510 nm, excitation wavelength: 470 nm). Stimuli are injected by a syringe through an injection port on the spectrofluorimeter, and their volumes never exceed 5% (v/v)^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Korchak HM, et al. A carbocyanine dye, DiOC₆(3), acts as a mitochondrial probe in human neutrophils. *Biochem Biophys Res Commun*. 1982 Oct 29;108(4):1495-501.

Caution: Product has not been fully validated for medical applications. For research use only.

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